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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,852	10/14/2004	Barbara Wagner	HU/5-22660/A/PCT	4838
324 7590 06/06/2007 CIBA SPECIALTY CHEMICALS CORPORATION PATENT DEPARTMENT 540 WHITE PLAINS RD P O BOX 2005 TARRYTOWN, NY 10591-9005			EXAMINER HAVLIN, ROBERT H	
			ART UNIT 1609	PAPER NUMBER
			MAIL DATE 06/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/511,852

Applicant(s)

WAGNER ET AL.

Examiner

Robert Havlin

Art Unit

1609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/10/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

**Status of the claims:** Claims 1-12 were amended when filed. Claims 1-16 are currently pending.

**Priority:** This application is a 371 of PCT/EP03/03870 (04/14/2003) which claims a priority to EUROPEAN PATENT OFFICE (EPO) 02405311.8 (04/17/2002) and SWITZERLAND 2135.02 (12/16/2002).

**IDS:** The IDS received on 01/10/2005 has been partially considered. The "foreign patent documents" and "other documents" were not included and thus not considered.

### ***Election/Restrictions***

1. Applicant's election with traverse of Group III in the reply filed on 04/02/2007 is acknowledged. The traversal is on the ground(s) that the elected group should be rejoined with the processes to make said compounds. This is not found persuasive because as detailed in the requirement for restriction the genus of compounds claims share a structural feature which is not a contribution over the prior art.

The requirement is still deemed proper and is therefore made FINAL. Thus claims 1-12 are withdrawn from consideration in this action.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

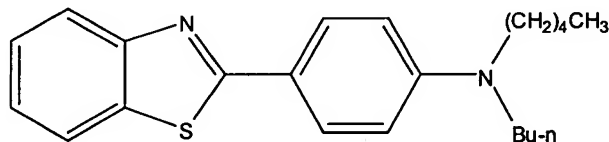
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zwilmeyer (US 2,715,629) in view of Degen et al. (US 4,002,733) and Fablan (Chem. Rev. 1992, p. 1205).

The claims are drawn to genus of compounds for the purpose of absorbing

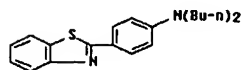
ultraviolet (UV) light including the species:



cosmetic preparations thereof and in combination with other UV protection substances which are listed in prior art references in tables 1-3 of the specification.

Determination of the scope and content of the prior art

Zwilmeyer teaches a genus of UV absorbing compounds including the species:



in example #7, col. 2.

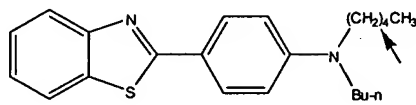
Degen teaches aminophenyl-benzothiazole compounds for use as sunscreen/cosmetic compositions (see example #8 on col. 18).

Fablan teaches the motivation of substituting long alkyl chains to improve solubility in the context of fine-tuning light absorbing organic compounds (3<sup>rd</sup> paragraph on page 1205).

Differences between the prior art and the claims

The species of Zwilmeyer is different from the instant claims only by one carbon

in the annotated position:



CH<sub>3</sub>).

(Bu-n is n-butyl which is -(CH<sub>2</sub>)<sub>3</sub>-

*Finding of prima facie obviousness*

The problem to be solved by the instant application is the development of a new UV absorbing composition/cosmetic. The applicants apparently looked to compounds with an aminophenylbenzothiazole core for their invention. One of ordinary skill in the art would be familiar with numerous teachings of organic compounds for use as sunscreens and UV absorbers such as the teachings in Degen et al. which provides examples of aminophenylbenzothiazole compounds (see example #8 on col. 18) as suncreening compositions. Since aminophenylbenzothiazole compounds are a known type of UV absorbers, one of ordinary skill in the art would have been motivated by Degen et al. and Fablan to take the compounds taught by Zwiiglmeyer and add an additional methylene (-CH<sub>2</sub>-) group to improve the solubility of the active ingredient in the composition to give a more homogenous cosmetic product. Furthermore, it would have been obvious to one of ordinary skill in the art to combined known compounds for the same purpose to achieve the same result. Therefore, the claims are obvious.

***Conclusion***

All claims are rejected.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Havlin whose telephone number is (571) 272-9066. The examiner can normally be reached on Mon. - Fri., 7:30am-5pm EST.

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If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Cecilia Tsang can be reached at (571)-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

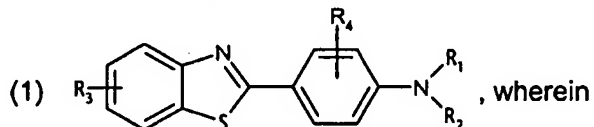
Robert Havlin  
Examiner

RH

  
JANET L. ANDRES  
SUPERVISORY PATENT EXAMINER

DT01 Rec'd PCT/PTC 14 OCT 2004

1. (currently amended): A method of protecting ultraviolet-sensitive organic materials from the harmful effects of UV radiation, which comprises contacting said materials with an effective UV-absorbing amount Use, as a UV filter, of a compound of the formula



R<sub>1</sub> and R<sub>2</sub> are each independently of the other hydrogen; unsubstituted or halo-, amino-, mono- or di-C<sub>1</sub>-C<sub>5</sub>alkylamino-, cyano- or C<sub>1</sub>-C<sub>5</sub>alkoxy-substituted C<sub>1</sub>-C<sub>22</sub>alkyl, C<sub>5</sub>-C<sub>10</sub>cycloalkyl, carboxy-C<sub>1</sub>-C<sub>22</sub>alkyl, carboxy-C<sub>6</sub>-C<sub>10</sub>aryl, C<sub>6</sub>-C<sub>10</sub>aryl, C<sub>6</sub>-C<sub>10</sub>aryl-C<sub>1</sub>-C<sub>5</sub>alkyl; carbamoyl; or sulfamoyl; or R<sub>1</sub> and R<sub>2</sub>, together with the nitrogen atom linking them, form a 5- to 7-membered heterocyclic radical; and

R<sub>3</sub> is hydrogen; or C<sub>1</sub>-C<sub>22</sub>alkyl; and

R<sub>4</sub> is hydrogen; hydroxy; C<sub>1</sub>-C<sub>22</sub>alkyl; or C<sub>1</sub>-C<sub>22</sub>alkoxy;

~~as a UV filter.~~

2. (currently amended): A method Use according to claim 1, wherein

R<sub>4</sub> is hydrogen.

3. (currently amended): A method Use according to ~~either claim 1 or claim 2~~, wherein

R<sub>1</sub> and R<sub>2</sub> are each independently of the other hydrogen; or C<sub>1</sub>-C<sub>12</sub>alkyl unsubstituted or substituted by halogen, amino, mono- or di-C<sub>1</sub>-C<sub>5</sub>alkylamino, cyano or by C<sub>1</sub>-C<sub>5</sub>alkoxy; and

R<sub>3</sub> is hydrogen; or C<sub>1</sub>-C<sub>5</sub>alkyl.

4. (currently amended): A method Use according to ~~either claim 1 or claim 2~~, wherein

R<sub>1</sub> and R<sub>2</sub> are each independently of the other hydrogen; or C<sub>1</sub>-C<sub>12</sub>alkyl; or

R<sub>1</sub> and R<sub>2</sub> together form a 5- to 7-membered heterocyclic radical; and

R<sub>3</sub> is hydrogen; or C<sub>1</sub>-C<sub>5</sub>alkyl.

5. (currently amended): A method Use according to ~~any one of claims claim 1 to 4~~, wherein

R<sub>1</sub> is hydrogen;

R<sub>2</sub> is C<sub>1</sub>-C<sub>12</sub>alkyl; and

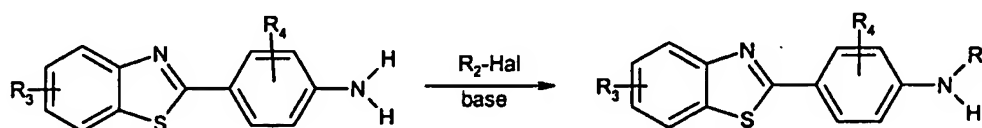
R<sub>3</sub> is hydrogen; or C<sub>1</sub>-C<sub>5</sub>alkyl.

6. (currently amended): A method Use according to claim 5, wherein  $R_2$  is branched or unbranched  $C_8-C_{12}$ alkyl.

7. (currently amended): A method Use according to claim 6, wherein  $R_2$  is n-hexyl; n-octyl; or 2-ethylhexyl.

8. (currently amended): A method Use according to ~~either~~ claim 1, wherein  $R_4$  is hydroxy.

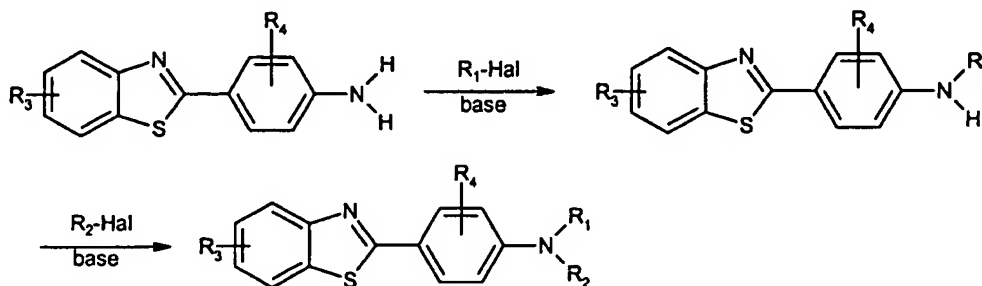
9. (currently amended): A process for the preparation of a compound of formula (1) according to claim 1 wherein  $R_1$  is hydrogen, in which process a  $R_3$ -substituted 2-(4-aminophenyl)-benzothiazole is alkylated with ~~the appropriate~~ a haloalkane/haloaralkane  $[(\text{ })R_2\text{-Hal}(\text{ })]$ , where Hal is a halide, using a base, in accordance with the following Scheme



wherein

$R_2$  and  $R_3$  and  $R_4$  are as defined in claim 1.

10. (currently amended): A process for the preparation of a compound of formula (1) according to claim 1 wherein  $R_1$  and  $R_2$  are alkyl, in which process a 2-(4-aminophenyl)-benzothiazole is alkylated with ~~the appropriate~~ haloalkanes/haloaralkanes  $[(\text{ })R_1\text{-Hal}$  and  $R_2\text{-Hal}(\text{ })]$ , where Hal is a halide, using a base, in accordance with the following Scheme:



wherein

$R_1$ ,  $R_2$  and  $R_3$  and  $R_4$  are as defined in claim 1.

11. (currently amended): A method Use of a compound of formula (1) according to claim 1 wherein ~~for~~ protecting human and animal hair and skin are protected from UV radiation.

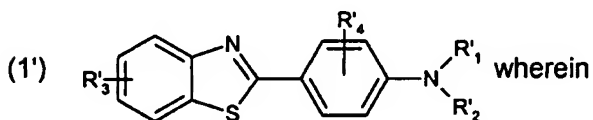
12. (currently amended): A method Use according to claim 11, wherein the compound of formula (1) is present in micronised form.

13. (original): A cosmetic preparation comprising at least one compound of formula (1) according to claim 1 together with cosmetically acceptable carriers or adjuvants.

14. (original): A preparation according to claim 13, which comprises further UV protection substances.

15. (currently amended): A preparation according to claim 14, which comprises, one or more UV protection substances selected from the group consisting of triazines, oxanilides, triazoles, vinyl-group-containing amides and cinnamic acid amides.

16. (original): A compound of formula



R'<sub>1</sub> is hydrogen; unsubstituted or halo-, amino-, mono- or di-C<sub>1</sub>-C<sub>5</sub>alkylamino-, cyano- or C<sub>1</sub>-C<sub>5</sub>alkoxy-substituted C<sub>1</sub>-C<sub>22</sub>alkyl; carboxy-C<sub>1</sub>-C<sub>22</sub>alkyl; carboxy-C<sub>6</sub>-C<sub>10</sub>aryl; C<sub>6</sub>-C<sub>10</sub>aryl; or C<sub>6</sub>-C<sub>10</sub>aryl-C<sub>1</sub>-C<sub>5</sub>-alkyl; carbamoyl; or sulfamoyl;

R'<sub>2</sub> is C<sub>5</sub>-C<sub>22</sub>alkyl unsubstituted or substituted by halogen, amino, mono- or di-C<sub>1</sub>-C<sub>5</sub>alkylamino, cyano or by C<sub>1</sub>-C<sub>5</sub>alkoxy;

R'<sub>3</sub> is hydrogen; or C<sub>1</sub>-C<sub>22</sub>alkyl; and

R'<sub>4</sub> is hydrogen; C<sub>1</sub>-C<sub>22</sub>alkyl; or C<sub>1</sub>-C<sub>22</sub>alkoxy.